

**Claims:**

**WHAT IS CLAIMED IS:**

- 5           1.     A method for determining the effectiveness of a therapy by  
analyzing biochip output patterns generated from biological samples taken at  
different sampling times from a patient undergoing the therapy, said method  
comprising the steps of:
- 10                 generating a viral diffusion curve associated with a therapy of interest;  
enhancing the output pattern interferometrically by performing a nucleic  
acid amplification;
- mapping each of the enhanced output patterns representative of  
hybridization activity to respective coordinates on the viral diffusion curve using  
fractal filtering;
- 15                 determining a degree of convergence between the mapped coordinates on  
the viral diffusion curves; and
- determining whether the therapy of interest has been effective based upon  
the degree of convergence from one sample to another.
- 20     2.     A method for determining the effectiveness of a therapy by analyzing  
biochip output patterns generated from biological samples taken at different

diffusion curve

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*(The following text is extremely faint and largely illegible due to low contrast and blurring. It appears to be a list or index of names and titles.)*

mapping each of the output patterns representative of hybridization activity to respective coordinates on the viral diffusion curve using fractal filtering;

determining a degree of convergence between the mapped coordinates on the viral diffusion curves;

5 determining whether the therapy of interest has been effective based upon the degree of convergence from one sample to another; and

wherein the biological sample is selected from a group consisting of a DNA, RNA, protein, peptide-nucleic acid (PNA) and targeted nucleic amplification (TNA) samples.

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